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Overall progress achieved since the United Nations Conference on Environment and Development

Report of the Secretary-General

Addendum

Demographic dynamics and sustainability*

(Chapter 5 of Agenda 21)

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* The report was prepared by the United Nations Population Fund (UNFPA) as task manager for chapter 5 of Agenda 21, in accordance with arrangements agreed to by the Inter-agency Committee on Sustainable Development (IACSD). It is the result of consultations and information exchange between United Nations agencies, international and national organizations, interested government agencies and non-governmental organizations.

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INTRODUCTION

1. This report reviews progress made in the implementation of the objectives set out in chapter 5 of Agenda 21 (Demographic dynamics and sustainability),[1] taking into account the decisions taken by the Commission on Sustainable Development on this subject at its third and fourth sessions. As Task Manager for chapter 5 of Agenda 21 (Demographic dynamics and sustainability), the United Nations Population Fund (UNFPA) prepared reports for the Commission on Sustainable Development at its third and fourth sessions on progress being made in the implementation of the aims set out in the chapter. Among other things, the reports described some salient features of the global and regional demographic landscape and noted the increase in general awareness of the vital links between population and the environment. The reports focused on actions taken by Governments in support of population and sustainable development policies and programmes and activities of non-governmental organizations and the United Nations system as follow-up to chapter 5 of Agenda 21 and chapter 3 of the Programme of Action of the International Conference on Population and Development (Interrelationships between population, sustained economic growth and sustainable development).[2]

I. OBJECTIVES

2. In chapter 5 of Agenda 21, the programme areas reflect three key objectives:

(a) Developing and disseminating knowledge concerning the links between demographic trends and factors and sustainable development;

(b) Formulating integrated national policies for environment and development, taking into account demographic trends and factors;

(c) Implementing integrated environment and development programmes at the local level, taking into account demographic trends and factors.

II. DEMOGRAPHIC BACKGROUND

3. The latest United Nations projections of world population[3] into the early decades of the twenty-first century show a marked slowing of population growth, as compared with similar projections for the same time periods made in the year of the United Nations Conference on Environment and Development (table 1). The world population is now projected to become 6.1 billion in 2000 and grow to 7.7 billion in 2020, figures that are, respectively, 137 million and 378 million lower than had been projected in 1992. Of particular significance is the projected slowing of the rate at which the population is expected to grow, a pattern that is found in all regions of the world. The figures of the 1996 Revision are lower than those projected in 1992, owing to an assumed faster decline of fertility rates in a number of developing countries, notably in South-central Asia and sub-Saharan Africa. Fertility is now estimated to have significantly declined in Bangladesh, Côte d'Ivoire, India, Kenya, Myanmar,

Pakistan, the Syrian Arab Republic and Turkey. Another factor in the reduction of the expected growth rate in the less developed regions is the higher mortality in countries affected by wars (Burundi, Iraq, Liberia, Rwanda) or by the spread of AIDS. In terms of the sustainability of the world's environmental resource base, however, the annual increase in absolute numbers is very important. For instance, in spite of clear signs that the fertility transition has started in sub-Saharan Africa, current levels of fertility in most countries of the region remain high and in 17 countries are equal to or exceed six births per woman, showing little or no sign of decrease. Hence, since the annual increments to the population of the developing world will continue to be significant (77 million per annum between now and the year 2020), the environmental implications remain far-reaching for many low-income countries, particularly those in South Asia and sub-Saharan Africa, where land degradation and deforestation are most severe.

Table 1. Projected population and annual growth rates for regions of the world,* 2000, 2010 and 2020

Region	Population (thousands)			Annual growth (percentage)	
	2000	2010	2020	2000-2010	2010-2020
	1992 Revision				
Africa	856 154	1 116 253	1 421 053	2.7	2.4
Asia	3 691 578	4 213 571	4 688 641	1.3	1.1
Europe	523 749	536 253	541 798	0.2	0.1
Latin America	522 962	600 380	670 721	1.4	1.1
North America	305 881	330 298	351 812	0.8	0.6
Oceania	30 967	35 366	39 501	1.3	1.1
World	6 228 254	7 149 506	8 049 940	1.4	1.2
	1996 Revision				
Africa	819 910	1 051 896	1 316 839	2.5	2.2
Asia	3 688 535	4 160 878	4 590 782	1.2	1.0
Europe	729 328	722 255	709 371	-0.1	-0.2
Latin America	514 688	589 301	658 496	1.4	1.1
North America	308 636	332 035	357 765	0.7	0.7
Oceania	30 253	34 411	38 671	1.3	1.2
World	6 091 351	6 890 775	7 671 924	1.2	1.1

Source: For 1992, World Population Prospects: The 1992 Revision (United Nations publication, Sales No. E.93.XIII.7); for 1996, United Nations, World Population Prospects: The 1996 Revision (United Nations publication, to be issued).

* The regional totals in the 1992 Revision do not add up to the world total. This is because the world total includes the former USSR, which is not shown separately here. For the 1996 Revision the population of the former USSR is included partly in Asia and partly in Europe.

4. Urbanization has become a dominant trend in the growth and distribution of the population. In 1950, only 29 per cent of the world population lived in urban areas. In 1994, the proportion was estimated to be 45 per cent. This urban population is growing three times faster than its rural counterpart. By 2005, half of the world population are expected to be urban dwellers. The development and environmental implications are profound, as urban authorities strive to meet infrastructure and basic services, such as housing, energy, water, sewage disposal, transportation and general utilities.

5. The impact of urbanization is most marked in the largest cities. Of the 15 largest urban agglomerations in 1950, 4 were in developing countries (Shanghai, Buenos Aires, Calcutta and Beijing). In 1994, 11 of the 15 were located in developing countries that are already facing severe problems related to urban degradation, industrial pollution, waste generation and general congestion. These cities include São Paulo, Mexico City, Beijing, Calcutta, Jakarta and Rio de Janeiro. By 2015, 13 of the 15 will be in developing countries: 10 in Asia, 2 in Latin America and 1 in Africa. Only two of the largest cities (Tokyo and New York) will be located in developed countries.

6. Despite the increasing difficulties in improving or even maintaining living conditions in the biggest cities, migration movements continue. Both internal migration and international migration are driven by population growth and by inequities within and between countries. The combination of poverty, rapid population growth and environmental damage is a powerful destabilizing factor driving urban growth. This is most marked in parts of Africa but can also be seen in South Asia and some Latin American countries. Thus, continuing high levels of in-migration, particularly in areas with high population densities, contribute to and intensify urban environmental stress.

7. According to the Programme of Action of the International Conference on Population and Development (Cairo, 1994),[2] action or inaction by the world community will determine how many people will inhabit the earth and share its finite resources in the decades ahead. To achieve early population stabilization, the Conference recommendations must be implemented immediately.

8. The Programme of Action is based on the premise that sustainable development can only be achieved by broadening the options and choices available to individual women and men. In particular, chapter 4, Gender equality, equity and empowerment of women, states that the emancipation and empowerment of women is both an important end in itself and an indispensable condition for sustainable development. Unless gender inequality and inequity are reduced, all other goals of the Conference are likely to go unfulfilled. Moreover, the Programme of Action is committed to improving the quality of life by focusing on three interdependent goals: reductions in infant, child and maternal mortality; expanded access to education, particularly for women and girls; and universal access to primary health care, including reproductive health and family planning services.

9. The success of future local and global environmental actions will be closely linked to the degree of success in implementing the Programme of Action. It is important to recognize that the Conference built on the consensus adopted at the United Nations Conference on Environment and Development and the World

Conference on Human Rights (Vienna, 1993) and anticipated many of the themes dealt with at the World Summit for Social Development (Copenhagen, 1995), the Fourth World Conference on Women (Beijing, 1995), the United Nations Conference on Human Settlements (Habitat II) (Istanbul, 1996) and the World Food Summit (Rome, 1996).

III. PROGRESS ACHIEVED

10. Although the linkages between population and the environment had been recognized prior to the United Nations Conference on Environment and Development (Rio de Janeiro, 1992), the Conference has itself led to a sharper focus on the issues and a set of recommendations for dealing with them. National and global concern about the interactions between population, resources and environment has grown considerably. Moreover, the International Conference on Population and Development referred to and reinforced the concerns in chapter 5 of Agenda 21 by noting the complex interrelationships between population, sustained economic growth, poverty and the environment. Chapter 3 of the Programme of Action urges that population factors - including not only population growth and age structure but also distribution, migration and reproductive health - be integrated into planning for sustainable development and a healthy environment. The significant influence of the status of women and girls on factors important to demographic transition and to the achievement of sustainable development is also emphasized, as is the involvement of women in population and environmental decision-making at all levels.

11. At the international level, discussions of environment and population issues raised at the United Nations Conference on Environment and Development have continued. Several regional conferences were organized in 1992 and 1993 focusing on the theme of population and sustainable development. For instance, the Bali Declaration, in Asia and the Pacific, and the Amman Declaration, in the Arab States, have both underscored the interconnectedness of population factors and environmental protection. The same theme was conveyed in the South Pacific by the Port Vila Declaration, which emphasizes that despite the differing circumstances of the small island developing States, all countries and territories mutually share a strong affinity with and dependence on land and ocean resources for their livelihood. Those resources have been under increasing pressure due to continuing population growth, expanding economic activities and natural disasters.

12. In Latin America and the Caribbean, on the other hand, attention was called to the fragile ecosystems in the rural areas that are continually endangered by the rapid expansion of human settlements. In Africa, a strategic framework of action to enable countries to address the problem of eradicating poverty through sound environmental management was developed by Economic Commission for Africa (ECA). Among the strategic areas identified were managing demographic change and pressures, achieving self-sufficiency and food security, and ensuring efficient and equitable use of water resources. At the 1993 European Population Conference, on the other hand, the main issues considered were population growth, age structure and international migration.

13. Both the Conferences in Rio de Janeiro and Cairo gave greater attention and visibility to the linkages between population growth and the environment, which has also been reflected in reports at the country level. For example, Nigeria has reported that its high population growth rate has led to an unacceptable level of natural resource extraction, thus defeating attempts to achieve sustainability. Likewise, Burkina Faso's high population growth rate has been correlated with the increasing rate of water extraction and the subsequent decline in water quality and quantity. In China, despite a decreasing population growth rate, the increasing increments in population size and soil erosion have led to a continuous decline in the amount of arable land per capita. In Bangladesh, the rapid increase in urban population was primarily caused by the heavy flow of rural migrants to urban areas in search of work and the inability of the rural areas to absorb and sustain further population increase. This phenomenon has put severe stress on the ability of municipalities to provide basic infrastructure and services, such as safe water, sewerage, sanitation and transportation.

14. A number of developed countries and economies in transition have similar problems. In Australia, urban migration and urban development have posed difficulties with regard to the treatment and disposal of sewage, industrial effluent associated with manufacturing processes and solid waste. Likewise, suburban sprawl, which has led to increased consumption of fossil fuel through extended commuting, disturbs the fragile ecosystems and permanently removes prime arable land from agricultural production. In other industrialized countries, particularly in Eastern Europe and the Commonwealth of Independent States, attention has been focused on the degradation of the environment and its subsequent impact on the health of the population.

15. In general, however, most countries recognize that the linkages between population and environment are not always clear and are often intricate and complex. In fact, the complexity of the interface has made it difficult to put into operation and translate the concepts into concrete plans and action programmes. Thus, a carefully targeted training programme to upgrade national skills in sustainable development planning and the development of better integrative methodologies are essential. Towards this end, efforts by the United Nations system have been put into training and developing methodologies and analytical tools to enhance understanding of the interactions between population and environment variables. For instance, the courses offered under the UNFPA Global Programme of Training in Population and Sustainable Development include population dynamics and environmental issues, decentralized planning, research techniques and computer training. The five institutions at which training is taking place are located in various regions of the developing world: Africa, Arab States, Asia and Latin America. Likewise, as discussed in the report on promoting education, public awareness and training (E/CN.17/1997/2/Add.26), UNESCO is increasingly emphasizing, in addition to basic education, population education and education for sustainable development.

16. Many countries have attributed the difficulty of integrating population and environment concerns into national planning and local programming to lack of data; lack of a critical mass of appropriately trained technical staff; and lack of guidelines. In response to these concerns, UNFPA country support teams are providing critical support to national Governments in collecting data on

population and environment and training national staff on methodologies and techniques in integrating population and environmental variables into development programmes. Also, in response to the last concern, UNFPA, in collaboration with the World Conservation Union (IUCN), has prepared a guidebook emphasizing the integration of the population/resource balance in sectoral planning exercises. It is particularly useful to local planning units and national planning ministries in developing countries.

17. Central to the integration of population factors into sustainable development policy and programme formulation is the provision of reliable and timely information relevant to population and environment decision-making. Thus, the CELADE regional population database for Latin America and the Caribbean (DOCPAL) has been a useful source of information, providing a number of services, including access to national databases on CD-ROM. The scope of DOCPAL has been expanded to cover population and environment information.

18. A number of computer-aided tools are being developed to integrate population and environment information. CELADE is developing a microcomputer-based tool to help such integration. On the other hand, the focus of the database for population and research (PRED Bank 2.0) is the interrelationship between population pressure and land use in rural areas. The programme was designed by the Population Division of the United Nations Secretariat as part of the Integrated Software Package for Geographical Information, Maps and Graphics (POPMAP). These tools are designed to be of assistance to planners at the national and local levels, particularly in improving the basis for decision-making by officials responsible for implementing population and environment policies and programmes.

19. Overall, what the two Conferences have achieved is a consensus that, although population growth is but one of many factors that undermine the environmental resource base upon which sustainable development ultimately depends, it is a significant factor. It is now widely acknowledged that population policies and programmes can have beneficial effects on the environment and overall development. High population growth rates make it more difficult for countries to channel adequate investments to the social sector and to expand basic infrastructure. The challenge of the Conferences remains how to reduce both unsustainable consumption and production patterns and the negative impacts of demographic factors on the environment.

IV. PROMISING CHANGES

20. Population and gender issues and their relationship to sustainable development figured prominently in the Conference in Rio de Janeiro and Cairo. Since then, more attention has been given to the critical role of women in population and environment programmes and in achieving sustainable development. Both chapter 5 of Agenda 21 and chapter 3 of the Programme of Action stress that the empowerment of women is essential and that improving the status of women - through better access to education, reproductive health services, including family planning and sexual health, and jobs - is an end itself and will yield high returns in terms of sustainable development.

21. Women grow a substantial proportion of the world's food, particularly in sub-Saharan Africa, Asia, Latin America and the Caribbean. There is considerable evidence that their labour-intensive food production practices tend to be more environmentally sound than others and could help to protect the resource base.

22. Throughout the developing world, women have demonstrated that they can make vital contributions to resource management and conservation. In India and China, for example, women have developed traditional methods designed to conserve the soil. Similarly, in Nepal, women have been responsible for reforestation of denuded slopes, greatly reducing soil erosion.[4] As resource managers, women in developing countries perform various roles: as providers of food, fuel, fodder and water; as caretakers of their family's health, by maintaining sanitary conditions around the house and by safely disposing of household wastes; and as conservationists, by safeguarding forests, soil, water and grazing areas. Thus, since the two Conferences, there are positive indications that in many parts of the developing world, the vital role of women as agents of change and as managers of both environment and reproduction has been duly recognized.

V. UNFULFILLED EXPECTATIONS

23. Despite the progress made since the two Conferences, particularly in raising the awareness of population and environment issues, much remains to be done. Although countries acknowledge that it is necessary to integrate population and environmental considerations, doing so has been difficult. Some constraining factors are inadequate data, insufficient trained human resources and lack of financial resources. Population and environment issues are so intertwined that piecemeal solutions will not suffice.

24. Sufficient funding should be made available for policy-oriented research focusing on priority environmental problems, particularly in developing countries where demographic pressure upon the natural resource base is increasing. For instance, there is need to identify ecologically endangered areas where overexploitation of natural resources and rapid population growth create serious problems: forested uplands, coastal fishing areas, small-holder agriculture in lowland areas, arid grazing lands and tropical forests.

25. Moreover, it is equally important to undertake research on populations at risk due to environmental degradation. Priority research[5] should focus on: coastal areas where populations are growing rapidly and critical resources are being depleted at an accelerated rate, such as on highly urbanized coasts; soil erosion and desertification, linked with inappropriate land-use practices often brought on by migration patterns; water scarcity, and misuse and pollution of water resources in both rural and urban areas; and deforestation resulting from inappropriate shifting cultivation patterns, fuelwood demands, and conversion of forests in upland areas to other uses, linked with demographic pressures among the poorest groups in society.

VI. EMERGING PRIORITIES

26. The need to address the interrelationships between changes in the environment and migration has emerged as a global concern, given the number of persons displaced by environmental degradation. According to the International Organization for Migration, it is estimated that in 1996, 25 million persons are environmentally displaced worldwide.[6] In fact, the number of people at risk of environmental displacement is bound to grow. In Kenya, as a consequence of the current desertification and soil degradation processes, the country will almost certainly produce large numbers of environmentally displaced persons. The case of Kazakstan and Uzbekistan, on the other hand, is illustrative of severe environmental deterioration that has led to mounting pressures towards mass migration.[7] In general, most of the environmentally displaced persons live in the African Sahel, the Horn of Africa, other parts of sub-Saharan Africa, the South Asian subcontinent, Mexico and China. The majority of these areas are also characterized by relatively rapid population growth.

27. Environmentally induced migrations are caused by natural disasters, such as earthquakes, flash flooding, typhoons, and volcanic eruptions; by nuclear and hazardous waste contamination; by agricultural and rural decline, resource pollution, chronic water shortages; or by dam construction and other large-scale development projects. On the other hand, environmental problems associated with mass migration could include deforestation, soil erosion and water contamination or depletion. Very often, large-scale and sudden movements into areas of already declining environmental and socio-economic conditions lead to a reduction in migrants' well-being; damage to the natural resource base on which the local economy depends; economic and political difficulties for the host areas; and erosion of efforts made by Governments and the international community to support sustainable development in both areas of origin and host areas.

28. There is an urgent need to respond to the twin challenge of preventing population movements triggered by environmental damage and mitigating the damage caused by mass migrations. Efforts should be made to apply existing scientific and technological potential in order to prevent situations that often lead to population displacements.

VII. CONCLUSIONS

29. Although there has been increased awareness of the importance of demographic trends and factors to achieving sustainable development since the Conferences in Rio de Janeiro and Cairo, much remains to be done to achieve the goals and recommendations of Agenda 21 and of the Programme of Action. Many countries are still experiencing difficulties in integrating population and environmental concerns into national and local development programming efforts. Inadequate data, lack of trained human resources and financial constraints have hampered such efforts. In addition, national population and sustainable development policies need to be broadened and linked with efforts in the area of health, including reproductive health, education, condition of women, poverty reduction and the environment.

30. Addressing the concerns of population, environment and sustainable development will require further collaboration and coordination, at both the national and international levels. Efforts should continue to enhance the full participation of all relevant groups, especially women, at all levels of population and environmental decision-making. Also essential are support to strengthen national capacity and capability in the fields of population and environment, development of relevant information systems, research and training, and financial resource mobilization.

Notes

[1] Report of the United Nations Conference on Environment and Development, vol. I, Resolutions Adopted by the Conference (United Nations publication, Sales No. E.93.I.8 and corrigendum), resolution 1, annex II.

[2] See "Report of the International Conference on Population and Development, Cairo, 5-13 September 1994" (A/CONF.171/13), chap. I, resolution 1, annex.

[3] World Population Prospects: The 1996 Revision, Annex I: Demographic indicators (United Nations publication, to be issued).

[4] UNFPA, Safeguarding the Future (United Nations publication, Sales No. E.89.III.H.2), p. 29.

[5] See UNFPA, Population, Resources and the Environment: The Critical Challenges (New York: UNFPA, 1991), pp. 115-117.

[6] "Report of the International Symposium on Environmentally-induced Population Displacements and Environmental Impacts Resulting from Mass Migrations, Geneva, 21-24 April 1996", p. 15.

[7] Ibid., p. 37.